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PROSKAUER ROSE LLP PATENT DEPARTMENT 1585 BROADWAY NEW YORK, NY 10036-8299			EXAMINER JOO, JOSHUA	
			ART UNIT 2154	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/933,264

Applicant(s)

ABDOLLAHI ET AL.

Examiner

Joshua Joo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Detail Action

Response to Amendment 12/11/2006

1. Claims 1-30 are presented for examination.

Response to Arguments

2. Applicant's arguments filed 12/11/2006 have been fully considered but they are not persuasive.

Applicant argued that:

- 3.. (1) Applicants have found no teaching or suggestion of an express feature of:

“a specification designating the particular group and not specifying any particular node of the particular group;” and

“containing a network layer header, including an address corresponding to the given node, but node the other nodes, of the particular group;”

Applicant submit that there is nothing about receiving any such specification at the source having the expressly recited format of Applicant's independent claims.

4. In response, Examiner previously cited,

Col. 16, lines 10-12, “Group controller node 501 has the responsibility of encrypting $2\log_2 N + 1$ keys and sending the keys to nodes A-H via a multicast message.”

5. In further detail regarding the keys and the multicast message, Srivastava teaches,

Col. 16, lines 60-63, “the group controller 501 creates a new group session key, the group controller 501 encrypts the new session key with the private key of the intermediate node 503.”

Col. 19, lines 13-17, “An administrator can determine a group session key, update one directory domain with the group session key, and directory replication then causes keys to be replicated.”

6. According to the above-cited sections of Srivastava, the administrator may specify the directory domain for group session key update and create group session key that is associated with a multicast group (inherently through the transmission of commands to the group controller) for transmission of the

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multicast message. Therefore, the node receives commands from the administrator, i.e. the source receiving the specification, for transmitting the message. By specifying the one directory domain and group session key for the multicast group, the administrator is also not specifying any particular nodes.

In addition, the group or the directory domain is defined with members and maintained by a node such as the group controller (Col. 8, lines 25-27. Members of multicast group. Col. 15, lines 49-54. Group controller maintain group session keys for members of group. Col. 10, lines 48-53. Domain has publisher and subscribers.). The administrator would not have to specify particular members of the group, but rather specify the maintained group.

7. Srivastava also teaches,

Col. 18, lines 15-16, "group controller 501 may send $2\log 2N+1$ messages to each group member individually."

8. It is well known in the art that a message transmitted in an IP network (Col. 7, lines 49-53. Network supporting Internet Protocol (IP)) comprises a message header containing a destination IP address, i.e. an address corresponding to the node. Furthermore, according to Srivastava, the messages are sent individually to each group member, alternatively to multicasting messages, so the messages' header does not identify other members.

9. (2) Applicants have been unable to find in Srivastava any discussion of the principles by which the group controller node 501 determines whether to send the multicast message or individual messages.

10. In response, according to claim 1, the determination by which individual messages are sent is "if each node of the particular group has a return path to the source,". Srivastava teaches that a node sends a request to the group controller to join a group (Col. 18, lines 10-15), and the node exchanges data with the group controller (Col. 15, lines 49-54), so the node has a path to the source. The group controller may send individual messages for the nodes that in the group.

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Furthermore, Srivastava teaches that the administrator may update the group session key, wherein, as stated above, members may receive the group session key via multicast messages.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 6 and 21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

- i) Regarding claims 6 and 21, the amendment of “a computer readable medium” is not supported by Applicant’s specification.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. Claims 6 and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Applicant is seeking to patent a computer readable medium containing a set of executable instructions. A computer readable medium containing a set of executable instructions may be interpreted as the set of executable instructions, software, per se. Therefore, a computer readable medium containing a set of executable instructions does not meet one of the four categories of invention and is not statutory. Specifically, a computer readable medium containing a set of executable instructions is not a series of steps or acts and thus is not a process. A computer readable medium containing a set of executable

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instructions is not a machine or manufacture. A computer readable medium containing a set of executable instructions is not a combination of substances and therefore not a composition of matter.

Furthermore, the set of executable instructions are for causing a programmable apparatus to perform a method (Claim 6), and to form a signal (Claim 21), but the claimed inventions are not actually executing the set of executable instructions. The claimed invention does not produce a useful, tangible, and concrete result and is not directed to a practical application of a judicial exception.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1, 2, 6-11, 14, 16-17, 21-26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, US Patent #6,684,331 (Srivastava hereinafter), in view of Bremer et al, US Patent #6,553,002 (Bremer hereinafter) and Hurst et al, US Patent #6,151,633 (Hurst hereinafter).

17. As per claims 1, 6-8, 16, and 21-23, Srivastava teaches substantially the invention as claimed including a method of managing a plurality of to-be managed nodes, Srivastava teachings comprising the steps of:

dividing a plurality of nodes into one or more groups, including a particular group of two or more nodes (Col. 13, lines 31-36. Join group. Col. 16, line 66-Col. 17, line 4. Multicast group comprising nodes A-H);

receiving a specification at a source to send a set of one or more messages from the source to the particular group of nodes (Col. 19, lines 13-16. Administrator determines group session key and update

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one directory. Claim 16. Group session key associated with multicast group. Inherent that the node receives commands from the administrator.), the specification designating the particular group and not specifying any particular node of the particular group (Col 16, lines 10-12. Send keys via multicast message. Col. 19, lines 13-17. Specify directory domain and update group session key, wherein the group session key is associated with multicast group.); and

if each node of the particular group has a return path to the source, then, for each given node of the particular group (Col. 14, lines 3-7; Col. 15, lines 49-54. Nodes communicate public value and keys for creating multicast group. Col. 18, lines 10-16. Send request to group controller.);

transmitting from the source a packet containing a network layer header, including an address corresponding to the given node, but not the other nodes, of the particular group, wherein the address corresponding to the given node, in the packet, is a distinct address that is different from any address corresponding to any other node of the particular group (Col. 7, lines 49-53. It is inherent that messages in IP network comprise a header containing destination address. Col 16, lines 15-16. Send messages to each group member individually.), and

wherein an operator can specify a given list of messages for execution by an entire group of the nodes by reference to an indication of the group, instead of separately specifying each individual node of that group at the time of specifying the given list of messages to be executed (Col. 19, lines 13-16. Administrator determines group session key and updates one directory with the group session key. Col 16, lines 10-12. Transmit messages, e.g. keys, to nodes A-H via a multicast message.).

18. Srivastava teaches of transmitting multicast messages. However, Srivastava does not specifically teach of a second header specifying a syntax and semantic by which the packet may be parsed, and one or more messages of the set; and waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node.

Bremer teaches of routing packets, i.e. messages, in a communications network, where the packet contains a header that stores data, information regarding how it will be parsed, and the address of the destination (Col. 6, lines 29-51).

19. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava and Bremer for the packets to contain header portions that stores information regarding parsing of the packet. Bremer's teachings would improve the system of Srivastava by allowing the nodes to process the received message according to the proper protocol (Col. 6, lines 31-36).

20. Srivastava and Bremer still do not specifically teach of waiting to receive at the source a response packet acknowledging proper receipt of the packet from the given node.

Hurst teaches of waiting to receive at the source acknowledgment of the receipt of the message (Col 4, lines 52-67).

21. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, and Hurst to wait for the receive at the source acknowledgment of the receipt of the message. Hurst's teachings would improve the reliability in the system of Srivastava and Bremer by providing confirmation that messages were received and ensuring that messages are received before subsequent actions.

22. As per claims 2 and 17, Srivastava teaches transmitting multicast message to the multicast group (Claim 16; Col. 16, lines 10-12). However, Srivastava does not specifically teach the method and apparatus wherein the packet is transmitted to a second one of the given nodes of the particular group at the time of, or after, transmitting the packet to a first one of the given nodes of the particular group but

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before receipt of the response packet from the first given node of the particular group acknowledging receipt of the packet transmitted thereto.

Hurst teaches of transmitting a message to nodes in a group at the same time and receiving responses afterwards (Col 4, lines 52-67. Multicast message and wait for acknowledgements.).

23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, and Hurst to transmit to nodes in a group at the same time and receive responses afterwards, which would improve the reliability in the system by providing acknowledgments to confirm the receipt of messages, and reducing the number of messages transmitted over the network at a given time.

24. As per claims 9 and 24, Srivastava teaches the method and apparatus, wherein the source knows, prior to said step (d), each of said addresses corresponding respectively to one of the given nodes of the particular group (Col. 7, lines 49-53. It is inherent that messages in IP network comprise a header containing destination address. Col. 16, lines 15-16. Send messages individually to nodes. Col. 17, lines 7-10, 27-30. Address identifier for nodes joining multicast group. The source must know the addresses of the nodes to send messages to each node.).

25. As per claims 10 and 25, Srivastava teaches the method and apparatus, further comprising the step (d1) of, prior to said step (d) storing, at the source, each of said addresses corresponding respectively to one of the given nodes of the particular group (Col 16, lines 15-16. Send messages individually to nodes. Col 17, lines 7-10, 27-30. Address identifier for nodes joining multicast group. It is inherent that the node has the addresses stored to be able to individually transmit messages to each node.).

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26. As per claims 11 and 26, Srivastava teaches the method of claim 1, further comprising, prior to said step (d), a step (d1) of obtaining, at the source, each of said addresses corresponding respectively to one of the given nodes of the particular group (Col 16, lines 15-16. Send messages individually to nodes. Col 17, lines 7-10, 27-30. Address identifier for nodes joining multicast group. It is inherent that the center has obtained the address to be able to individually transmit messages to each node.).

27. As per claims 14 and 29, Srivastava and Hurst teach said step (d) enabling the source to control how many of the given nodes of the particular group issue a response packet to the source within a given time period (Col 16, lines 10-16. Transmit message to group members. Hurst: Col 4, lines 52-67. Wait to receive acknowledgements.).

28. Claims 3-5, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, Bremer, and Hurst, in view of Kekic et al, US Patent #5,999,179 (Kekic hereinafter).

29. As per claims 3 and 18, Srivastava teaches the method and apparatus wherein each given node of the particular group has a return path to the source (Col. 14, lines 3-7; Col. 15, lines 49-54. Nodes communicate public value and keys for creating multicast group. Col. 18, lines 10-16. Send request to group controller.). However, Srivastava does not specifically teach wherein one of the one or more messages in the packet is a request to retrieve a specific information obtainable from each given node of the particular group, the method further comprising the step of: f) receiving from each given node of the particular group a current value of the specific information obtainable from the respective given node.

Kekic teaches of a client-server network management system, where a managed network element replies to the requested information from the server (Col. 15, lines 59-60).

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30. It would have obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Kekic to receive specific information from the managed elements, which would allow configuration changes and management of network elements as a result of receiving the requested information (Col. 15, lines 52-62)

31. As per claims 4 and 19, Srivastava does not specifically teach the method and apparatus wherein each given node of the group contains at least a portion of a hierarchically organized management information base (MIB), the method comprising the step of displaying on a display device the hierarchical organization of the MIB and a list of specific parameters of the MIB to be accessed.

Kekic teaches of displaying the hierarchical representation of information (Fig 3B, 305; Col 15, lines 10-16), displaying and setting MIB variables (Col. 28, lines 32-39), and nodes containing hierarchical based MIB variables (Col. 23, lines 9-20, 54-62; Col. 24, lines 34-40.)

32. It would have obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Kekic to displaying on a display device the hierarchical organization of the MIB and list specific parameters of the MIB, and the nodes containing hierarchical based MIB variables. Kekic's teachings would improve the efficiency and the user-friendliness of the system of Srivastava, Bremer, and Hurst by providing visual representation of information for determining the state of the managed nodes.

33. As per claims 5 and 20, Srivastava teaches the method wherein each node of the group has a return path to the source. However, Srivastava does not specifically teach the method and apparatus wherein each node of the group has a return path to the source of commands *and* wherein the command is a request to retrieve a specific information corresponding to the list of specific parameters, the method further comprising the steps of: receiving from each given node of the group a current value of the

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specific information corresponding to the list of specific parameters, and displaying a current value of each specific parameter of the list.

Kekic teaches of a managed network element replying to requested information from the server (Col. 15, lines 59-60), and displaying and monitoring the attributes of network elements, where the user can click on one of several attributes of the element to obtain values regarding the element (Col. 27, lines 20-31).

34. It would have obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Kekic to request to retrieve a specific information corresponding to the list of specific parameters, receiving from each given node of the group a current value of the specific information corresponding to the list of specific parameters, and displaying a current value of the each specific parameter of the list. Kekic's teachings would allow remote monitoring and management of network elements (Col 15, lines 63-66), and would improve user-friendliness by allowing the user to visually determine the attributes and status of the network elements

35. Claims 12-13 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, Bremer, and Hurst, in view of Wacławsky et al, US Patent #6,628,610 (Wacławsky hereinafter).

36. As per claims 12-13 and 27-28, Srivastava, Bremer, and Hurst taught of receiving response packets (acknowledgements) in response to the source transmitting messages to the nodes. However, Srivastava does not specifically teach the method, wherein step (d) enables the source to control a rate of transmission of packets to the given node of the particular group or to control a rate of reception of response packets from the given node of the particular group.

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Waclawsky teaches that the source can control the transmission rate of packets to the receivers (Col 15, lines 50-53).

37. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teachings of Srivastava, Bremer, Hurst, and Waclawsky to control the transmission rate of packets, would improve the quality of service by reducing network congestion and allowing the system to respond and adjust to the conditions of the network (Col. 15, lines 48-50).

38. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srivastava, Bremer, and Hurst, in view of Miller et al, US Patent #5,727,002 (Miller hereinafter).

39. As per claims 15 and 30, Srivastava teaches of individually sending messages to each node. However, Srivastava does not teach the method and apparatus, further comprising the step of: (a1) prior to said step (a), obtaining, at the source, a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group, wherein said step (a) of dividing, performed subsequent to obtaining the plurality of addresses, is achievable entirely at the source *without* communication of messages from or to the source and without communication of messages among any of the plurality of to-be-managed nodes.

Miller teaches of (a), obtaining, at the source, a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group (Col. 15, line 60-Col. 16, line 15. Server maintains list of IP addresses of clients in each group.), wherein said step (a) of dividing, performed subsequent to obtaining the plurality of addresses, is achievable entirely at the source without communication of messages from or to the source and without communication of messages among any of the plurality of to-be-managed nodes. (Col. 15, line 60 – Col. 16, line 15. Organize and manipulate the list of clients in each group; and identify group by client IP addresses.).

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40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Srivastava, Bremer, Hurst, and Miller to obtain, at the source, a plurality of addresses, each of the plurality of addresses being a unicast address for a respective one of the given nodes of the particular group, wherein said step (a) of dividing, performed subsequent to obtaining the plurality of addresses, is achievable entirely at the source without communication of messages from or to the source and without communication of messages among any of the plurality of to-be-managed nodes, which would allow individual identification of each client, and allowing the source to organize and manipulate the list of clients in each group (Col. 15, lines 60-64).

Conclusion

41. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

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43. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned 571-273-8300.

41. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 8, 2007
JJ


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